

Bay/Delta Bioregion

The Bay/Delta Bioregion is one of the most populous, encompassing the San Francisco Bay Area and the Sacramento-San Joaquin River Delta. The bioregion is internationally renown for the computer industry of the "Silicon Valley" and the wine-producing vineyards of Napa and Sonoma counties. Environmentally, the bioregion is the focus of a great debate over conflicting demands for the water that flows through the Delta, supplying two-thirds of California's drinking water, irrigating farmland, and sustaining fish and wildlife and their habitat. Under a historic accord in 1994, competing interests initiated a process for working together to "fix" the Delta.

Location, Cities, People

The bioregion fans out from San Francisco Bay in a jagged semi-circle that takes in all or part of 12 counties, including the state's top six in family income: Marin, Contra Costa, Santa Clara, Alameda, Solano, San Mateo, as well as the counties of San Francisco, Sonoma, Napa, San Joaquin, and parts of Sacramento, and Yolo. Major cities include San Francisco, Santa Rosa, Oakland, Berkeley, Vallejo, Concord, and San Jose. Though of moderate size, the Bay/Delta Bioregion is the second most populous bioregion, next to the South Coast Bioregion, with 6 million people, based on the 1990 census.

The Bay/Delta Bioregion extends from the Pacific Ocean to the Sacramento Valley and San Joaquin Valley bioregions to the northeast and southeast, and a short stretch of the eastern boundary joins the Sierra Bioregion at Amador and Calaveras counties. The bioregion is bounded by the Klamath/North Coast Bioregion on the north and the Central Coast Bioregion to the south.

Tourist Attractions, Industries

San Francisco, famed for cable cars, Chinatown, Fisherman's Wharf, and the Golden Gate Bridge, is a top tourist attraction of the bioregion. The idyllic Sonoma Coast features remote beaches, quaint villages and historic

spots, such as Fort Ross, an early 19th century Russian fur trading post and site of the nation's oldest weather station, established in 1874. The rustic wine country of the Napa and Sonoma valleys are major visitor draws, and Point Reyes National Seashore in Marin County is one of the best bird watching areas in the West, with 45 percent of North America's bird species.

Prominent industries of this bioregion include banking, high-technology and biotechnology, wine-making, fishing, shipping, oil refining, "think tanks," dairy farming, beer brewing, and fruit ranching. The Pacific coastal area of this bioregion offers spectacular scenery and places to visit, such as Point Reyes National Seashore, John Muir Woods National Monument, Golden Gate National Recreation Area, and numerous state parks and state beaches. A 400-mile long Bay Trail encircling San Francisco Bay is being completed that provides public access for hiking, bicycling, water sports, wildlife viewing, historic sites, and much more.

Climate, Geography

The temperatures in this Mediterranean climate don't vary much year-around. The coast experiences relatively cool, often foggy summers, mild falls, and chilly, rainy winters. Further inland, hot dry summers and warm autumns are followed by mild, wet winters. Snowfall is rare. The bioregion is mostly hilly with low coastal mountains and several peaks rising above 3,000 feet, including Mt. Diablo at 3,849 feet, in a state park. Coastal prairie provides grazing for wild and domestic animals, including dairy cattle.

The bioregion is named for its two major watersheds, San Francisco Bay and the Sacramento/San Joaquin Delta. Major rivers include the Russian, Gualala, Napa, Petaluma, and Alameda, and Putah Creeks. A network of reservoirs and canals comprise the State Water Project delivery system. Lake Berryessa in Napa County is the largest lake.

Plants, Wildlife

The habitats and vegetation of the Bay/Delta Bioregion are as varied as the geography. Coastal prairie scrub, mixed hardwoods and valley oaks are found among the rolling hills and mountains that descend to the ocean.

Redwoods abound in Santa Cruz County.

Coastal salt marsh lies around San Francisco Bay, and freshwater marshes are found in the Delta. Eucalyptus, manzanita, northern coastal scrub, California buttercups, goldfields, and Tiberon mariposa lily also are popular in the bioregion. Rare plants include Marin western flax, Baker's manzanita, Point Reyes checkerbloom, and Sonoma sunshine. Salt and freshwater marshes provide pickleweed, great bulrush, saltbush, and cattail.

Wetlands in the Bay/Delta Bioregion — brackish and freshwater — furnish resting, nesting, feeding and breeding places for birds and waterfowl along the Pacific Flyway. These marshes, rich in biodiversity, are popular and necessary wintering spots for migrating birds.

Birds include canvasback, western grebe, black-crowned night heron, great egret, snowy egret, California brown pelican, white pelican, gull, acorn woodpecker, golden eagle, western bluebird, Caspian tern, American avocet, and cedar waxwing. Marine life includes Chinook salmon, harbor seal, sea lion, leopard shark, and bat ray. Other wildlife includes grey fox, mule deer, bobcat, raccoon, Pacific tree frog, and the swallowtail and painted lady butterfly.

Endangered species include the California least tern, California black rail and clapper rail, Smith's blue butterfly, salt marsh harvest mouse, California freshwater shrimp, northwestern pond turtle, and tidewater goby. For a complete list of the Bay/Delta Bioregion's federal and state endangered, threatened and rare species, please refer to the chart at the end of this bioregional section.

CURRENT CONSERVATION INITIATIVES

The Bay Area Open Space Council, a new model of voluntary regional collaboration among land conservation agencies and organizations, is working together to find ways to protect open space in the region. The organization was founded in 1990 and has evolved from a few

colleagues sharing ideas once a month to a dynamic organization of professionals from about forty public agencies and non-profit land conservation organizations who share land conservation responsibilities for the San Francisco Bay Area.

The Bay Area Open Space Council (Council) brings together all levels of government: local, regional, state, and federal and encompasses both public agencies and non-profit organizations. This collaboration is helping to identify and understand how the programs and projects of over 150 agencies and organizations in the area fit together. The Council has begun to systematically identify the region's collective open space protection and outdoor recreational needs, uncover institutional gaps that have impeded effective partnership efforts in the past, and quantify the financial resources required to meet those needs. In 1997, the Council filled one of the institutional gaps by successfully sponsoring legislation establishing the Bay Area Conservancy Program within the California State Coastal Conservancy.

Working through a collection of high-tech computer mapping and analysis and review by experts in the region, the Council was able to determine the status of open space in the county. By looking at the maps and master plans of the nine counties in the Bay Area, they were able to identify about 900,000 acres of open space that has been permanently protected in the area. The Council also conducted a "needs assessment" and determined that the Bay Area would have to protect an additional 1.1 million acres of open space in order to encompass the region's vision of open lands.

With that need identified, the Council is working on identifying potential funding sources to help protect the land. Five of the nine counties in the Bay Area have adopted half-cent sales taxes (with voter approval) for transportation purposes. The research and cooperative work of the Council suggests that it is a realistic goal for the bay region to think about establishing a lasting open space legacy which can be passed on to future generations. The Council is behind the vision and willing to help the people of the Bay Area chart the course to make that goal come true.

For more information contact: John Woodbury, Bay Area Open Space Council (510) 654-6591.

*The **Napa River Flood Management Effort** is the result of environmental groups, government agencies, and the local community working together. The result, an innovative “living river” strategy, will help protect lives and property and restore natural value to the river. In a strong show of support, the citizens of the county approved a bond issuance to fund the local cost of the project. In doing so, the community has created a source of funds to support the restoration project.*

Over the past 150 years, much of the effort to manage the flow of California’s rivers has centered on the construction of levees and dams to capture and hold back high flows. In the aftermath of the 1990 floods that caused an estimated \$2 billion in damage, however, Governor Wilson established the Flood Emergency Action Team (FEAT) to assess the state emergency response system and recommend long-term actions to help protect Californians and their homes, property, and businesses from future flood disasters.

When the final FEAT report was released in May 1997, foremost among its recommendations was a call to reassess California’s flood control system. The FEAT report recommended that flood control districts, city, county, and environmental groups seek new approaches to flood management that combine natural and man-made alternatives.

An example of these new methods is the Napa River Flood Management Effort where a coalition of environmental groups, government agencies, and the local community have come together to develop an innovative, “living river” strategy to protect lives, property, and natural values. Napa’s strategy is quite impressive. The project does not rely on any single approach, such as raising levees or moving all structures out of harm’s way, but combines multiple strategies in a way that makes optimal use of engineering and ecology. Levees are set-back to allow the floodplain to regenerate and the river to spread during floods; a flood bypass is to be constructed to carry water across the oxbow portion of the Napa River that loops through the

downtown; bridges will be replaced or raised; and new levees and dikes constructed.

To fund the local share of the cost of the project, the citizens of Napa County approved a bond issuance of roughly \$110 million over twenty years. Cooperation among members of the Friends of the Napa River, Napa County Land Trust, Napa County Flood Control and Water Conservation District, California Department of Fish and Game, and the U.S. Army Corps of Engineers was instrumental to the passage of the bond measure. The federal government will contribute an equal amount as its share of the cost of the project.

The project has been well supported from its beginning because it addresses multiple interests and goals in a realistic manner. Hopefully it will lead the way to a future in which flood management and ecosystem protection can co-exist in other river settings.

For more information contact: Napa River Resource Conservation District at (707) 252-4188.

*The **CALFED Bay-Delta Program** is addressing the vexing issues of the Bay-Delta ecosystem, the linch pin of California’s water delivery system. This five-year effort is improving environmental protections for Bay-Delta wildlife while restoring a measure of water supply reliability to urban and agricultural interests statewide.*

The Bay-Delta Estuary, located at the confluence of the Sacramento and San Joaquin Rivers before exiting through San Francisco Bay, has been the focus of competing economic, environmental, urban and agricultural interests for decades. Disagreements among these interests have included how much water to take from the system and when, protecting endangered species, maintaining water quality and protecting those who live and work in the Delta itself. With little agreement and a lot of gridlock, over the years the Bay-Delta system has declined, and today is in serious trouble.

There are reasons to care. This 1,600-square-mile estuary is the largest wetland habitat and estuary in the West. It is home to some 750 plant and animal species, some found nowhere

else on earth, and serves as a critical part of the Pacific Flyway over which hundreds of migrating birds travel each year. Two-thirds of California's salmon swim through the estuary each year, including the endangered winter-run Chinook and the threatened Delta smelt. Much of the water of the system is also needed to irrigate the nation's largest and most productive agricultural industry and to provide drinking water for more than 22 million Californians. Ultimately, the vitality of California's economy, the world's seventh largest, depends on the health of this extraordinary ecosystem.

Early in 1993, federal agencies issued regulations to protect the winter-run Chinook and the Delta smelt. These actions implied large diversions of water away from urban and agricultural towards fisheries associated habitat. This step opened the door to an unprecedented degree of stakeholder cooperation and a cooperative spirit began to emerge. On December 15, 1994, California and the U.S. Government signed the Bay-Delta Accord and created CALFED, an unprecedented collaboration among state and federal agencies and the state's leading urban, agricultural and environmental interests. CALFED's mission is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system.

During the initial stages of the CALFED Program, it was determined that some actions were so fundamental to the system's recovery that they should be included in whichever solution was ultimately chosen. These "common elements" include levee system integrity, water quality, ecosystem restoration, watershed management, water transfers and water use efficiency, storage and conveyance.

The program is divided into three phases which span three decades. Phase I, completed in 1996, concentrated on identifying and defining the problems confronting this complex system through the application of sound scientific practices and stakeholder cooperation. Phase II, currently underway, involves reviewing restoration alternatives and conducting a comprehensive environmental review process. Phase III will be the implementation phase, which is expected to transpire over a 30-year period, and will involve site-specific

environmental review and additional funding of more than \$1 billion. All phases include extensive public interaction and input, essential to any long-term solution.

Success early on led to bi-partisan support between the governor and State Legislature to place a \$995 million water bond on the state ballot; in late 1996, California voters overwhelmingly approved the Safe, Clean, Reliable Water Supply Act (Proposition 204). Among its principal provisions, Prop. 204 provided \$390 million for habitat restoration and enhancement projects; the development of parkways on some of the state's primary rivers; programs to improve water quality and promote conservation; and efforts to enhance water supplies, improve water management and flood control prevention. In 1997, state leaders secured a federal pledge of \$429 million as well. These restoration efforts to date have been a tremendous success throughout the Central Valley with both local governments and landowners.

Choosing the best solution to the problems of the Bay-Delta system is not purely a technical decision. It will be up to California's policymakers, stakeholders and the general public to decide what issues are most important to the state's future. Regardless of the outcome, however, this ambitious program is being reviewed nationwide as the biggest ecosystem restoration effort ever undertaken. No doubt, its formal partnering of stakeholders will serve as a model, both large and small, for communities to emulate.

For more information contact: CALFED Bay-Delta Program at (916) 654-6163.

*The **San Francisco Bay Joint Venture** is a public/private partnership of nineteen public agencies, environmental organizations, business groups and agricultural interests that have joined forces to protect and restore all types of wetland habitat throughout the Bay Area for the benefit fish and wildlife populations.*

The San Francisco Bay Joint Venture (SFBJV) was initiated in 1995 with the intention of protecting, restoring and enhancing wetland habitats to meet the goals of the North American Waterfowl Management Plan and to benefit all

wetland-dependent species in the San Francisco Bay Estuary. SFBJV is the fifteenth joint venture to be established in the United States, Canada and Mexico. SFBJV supports the development and implementation of watershed management plans that foster a cooperative community-based approach to the protection and enhancement of stream corridors.

SFBJV focuses on completing habitat acquisition and restoration projects using non-regulatory methods by leveraging existing resources, developing new funding sources and creating unique partnerships. Since 1995, SFBJV has acquired 3,175 acres of wetlands and restored 871 acres through joint venture partners. SFBJV is currently working with several new watershed planning initiatives including the Petaluma River, Alhambra Creek and San Pedro Creek, while continuing to assist with the implementation of completed plans on Sonoma Creek and the Napa River. The organization has also begun reaching out to the multiple urban creek groups to improve riparian habitat and the quality of marshes at the Bay's edge.

Pending SFBJV protection projects in the total 3,200 acres, and pending restoration and enhancement projects total just over 6,000 acres. In total, the SFBJV Implementation Strategy, in cooperation with the San Francisco Bay Regional Wetlands Ecosystem Goals Project, recommends that approximately 60,000 acres of diked baylands, managed marsh and salt ponds should be converted to tidal marsh over the next 100 years. It also recommends that these conversions occur gradually and that seasonal wetlands be restored nearby to offset the loss of managed habitats.

SFBJV embodies the type of partnership, cooperation and creativity essential to accomplishing success and is an example of the types of project and partnerships that can be used to increase wetland acreage on both public and private lands. This new approach holds great promise as a model for collaborative partnering and successful restoration. Funding for SFBJV is provided by the California State Coastal Conservancy, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, National Park Service and California Resources Agency.

For more information contact: Nancy Schaefer, Coordinator, San Francisco Bay Joint Venture at (510) 286-6767.

The Sonoma County Agricultural Preservation and Open Space District is a special district that was developed to protect open space and agriculture in the county. Establishment of the district will allow the county to control open space decisions that are being made in the jurisdictions by providing a means of funding acquisitions of high priority to the area.

Open space districts have become increasingly effective means of protecting open space in counties and cities. There are seven of these districts now in the state – several of which are clustered in the San Francisco Bay Area. Open space districts represent a unique opportunity for local entities to assume control of open space decisions being made in their area.

The Sonoma County Agricultural Preservation Open Space District, for example, was recently adopted in Sonoma County, the northernmost of the nine "Bay Area" Counties and the 15th largest agricultural county in California. The Sonoma County Agricultural Preservation and Open Space District is a dependent special district formed under Government Code 65562 and 5500 of the California Public Resources Code. The intent of the district is to further state policy on the preservation of open space and to help implement the Open Space and Agricultural Resources Elements of the 1989 Sonoma County General Plan.

The district may be financed by gifts, grants, special and general taxes, general obligation bonds, and other sources of revenue authorized by law or any combination thereof. The principal focus of the program is to acquire conservation easements, but the district may acquire fee rights in property for recreation purposes where the project is in conformity with the program expenditure plan. The district can only purchase interests in real property from willing sellers. Land rights can also be deeded to the district through Sonoma County's development approval process.

The district was formed by a vote of the County

electorate during the November 1990 elections. Primary financing is by contract with the Sonoma County Open Space Authority. The Authority, an independent entity, levies the 0.25 percent sales tax imposed in Sonoma County in November 1990 for a period not to exceed 20 years. The current annual allocation from the sales tax is approximately \$12,500,000 with \$1,500,000 being the total annual program operations budget.

The District Acquisition Plan was adopted in December 1992. The principal focus of the Acquisition Plan and Authority's Expenditure Plan is not only to protect significant agricultural lands, but also to preserve community separators between cities, scenic areas of high visual quality, critical habitat areas, riparian corridors, and other areas of biotic significance. The Districts has a Competitive Matching Grant Program with the incorporated areas of the County to protect significant urban open spaces.

Since its inception, the district has protected 26,592 acres through conservation or open

space easements and 110 separate transactions at direct land costs of \$42,019,056. An additional 47 transactions are currently under negotiation totaling 27,000 acres. Twenty-nine completed projects have some current or future recreational component such as for trails or parks and twelve fee purchases have been made totaling 1,677 acres, which are managed by local and state park agencies. Nine projects totaling 412 acres are currently under negotiation with eight cities involved.

Currently, the district, in cooperation with Sonoma County Regional Parks and the Sonoma County Water Agency, is completing a two-year 'Outdoor Recreation Plan' for Sonoma County. An update of the District's Acquisition Plan is also underway. The district has a staff of ten full time employees and a Citizens' Advisory Committee consisting of seventeen members.

For more information contact: David Hansen, General Manager, Sonoma County Agricultural Preservation and Open Space District at (707) 524-7360.